



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,591	08/03/2001	Harry V. Paul	114296-2061	7725
.30734 7590 02/26/2004 BAKER + HOSTETLER LLP WASHINGTON SQUARE, SUITE 1100 1050 CONNECTICUT AVE. N.W. WASHINGTON, DC 20036-5304			EXAMINER KNOLL, CLIFFORD H	
			ART UNIT 2112	PAPER NUMBER 76

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,591

Applicant(s)

PAUL, HARRY V.

Examiner

Clifford H Knoll

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4, 7</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, the "logically arranged" is unclear because it is not clear what structure is intended to be recited by a logical arrangement. Likewise, the "logical coupling" of claim 32 does not clearly recite a structural limitation

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Carvey (US 6606656) with inherent features as evidenced by Dally (US 6370145).

Regarding claim 1, Carvey discloses a fibre channel switch with a plurality of fabric switch modules forming at least one fabric switch to provide connections (e.g., col. 6, lines 7-9), and a backplane having connectors receiving a first plurality of input/output modules and fabric switch modules and the first set of connections through the backplane between the first input/output modules and one of the fabric switch modules (e.g., col. 6, lines 3-6). Carvey directs attention to particular features of the backplane and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey.

Regarding claim 2, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses the first set connections are between the at least one switch and the input/output modules (e.g., col. 1, line 66 – col. 2, line 3).

Regarding claim 3, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses providing up to 64 fibre channel ports (e.g., col. 2, lines 53-54).

Regarding claim 4, Carvey also discloses a second backplane having a second plurality of fabric switch modules, and the inherent features of the fabric router network as taught by Dally. Dally inherently discloses having a second plurality of input/output modules (e.g., col. 2, lines 47-50).

Regarding claim 5, Carvey also discloses the connectors of the backplane and the second backplane are configured to provide a second set of connections between the second plurality of input/output modules and the at least one fabric switch of the backplane (e.g., col. 7, lines 44-48).

Regarding claim 6, Carvey also discloses the second sets of connections comprise jumper plugs (e.g., col. 7, lines 62-65).

Regarding claim 7, Carvey also discloses first and second sets of connections provide up to 128 fibre channel ports (e.g., col. 2, lines 53-54).

Regarding claim 8, Carvey also discloses third and fourth backplanes having third and fourth pluralities of input/output modules (e.g., col. 5, lines 50-55).

Regarding claim 9, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses providing up to 256 fibre channel ports (e.g., col. 2, lines 53-54).

Regarding claim 10, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses having a 16x16 switch connectivity (e.g., col. 1, line 67).

Regarding claim 11, Carvey also discloses a logical arrangement of two switches (e.g., col. 5, lines 9-14).

Regarding claim 12, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses speeds of 1 Gb/s (e.g., col. 1, lines 30-33).

Art Unit: 2112

Regarding claim 13, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses where one fabric switch module is a redundant module (col. 6, lines 66-67).

Regarding claim 14, Carvey also discloses where the first set of connections is provided through backplane pins (e.g., col. 14, lines 7-9).

Regarding claim 15, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses the crossbar switch (e.g., col. 1, lines 65-67).

Regarding claim 16, Carvey discloses a chassis including: a plurality of fabric switch modules forming at least one switch to provide connections between the fibre channel ports (e.g., col. 6, lines 7-9); and a backplane receiving the plurality of input/output modules and the fabric switch modules, the backplane having connectors to provide connectivity between the input/output modules and the fabric switch modules (e.g., col. 6, lines 3-6). Carvey directs attention to particular features of the backplane and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey.

Regarding claim 17, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses two sets of connections between

each input/output module and the plurality of fabric switch modules (e.g., col. 6, lines 31-34).

Regarding claim 18, Carvey also discloses each fabric switch module provides two switches, each switch having one of said two sets of connections to the input/output modules (e.g., col. 5, line 10).

Regarding claim 19, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the fibre channel switch is a single chassis providing up to 64 fibre channel ports (e.g., col. 2, lines 50-54).

Regarding claim 20, Carvey also discloses a plurality of loopback plugs for one of said two sets of connections (e.g., col. 15, lines 31-34).

Regarding claim 21, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses a second chassis to provide up to 128 fiber channel ports (e.g., col. 2, lines 50-54).

Regarding claim 22, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein each fabric switch module provides one switch (e.g., col. 2, lines 8-10).

Regarding claim 23, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the connectors are configured to provide a first set of connections between the input/output modules and the fabric switch modules of the chassis and a second set of connections between input/output modules of the second chassis and the fabric switch modules of the chassis (e.g., col. 2, lines 50-53).

Art Unit: 2112

Regarding claim 24, Carvey also discloses wherein the second set of connections comprises a plurality of jumper plugs (e.g., col. 7, lines 62-65).

Regarding claim 25, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses three chassis to provide up to 256 fibre channel ports (e.g., col. 2, lines 53-54).

Regarding claim 26, Carvey also discloses wherein a plurality of connectors in each chassis are horizontal fabric switch connectors providing horizontal connectivity to the at least one switch (Figure 1).

Regarding claim 27, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein the at least one switch in each chassis has one set of connections to the input/output modules of each chassis (e.g., col. 2, lines 1-3).

Regarding claim 28, Carvey also discloses where at least one switch has permanent, vertical, horizontal, and diagonal connections to the input/output modules of each chassis (e.g., col. 5, lines 15-24, Figure 1).

Regarding claim 29, Carvey also discloses a plurality of connectors in each chassis are diagonal fabric switch connectors providing diagonal connectivity to the at least one switch (e.g., col. 5, lines 15-24, Figure 1).

Regarding claim 30, Carvey discloses the inherent features of the fabric router network as taught by Dally. Dally discloses a director switch comprising: providing an identical number of user ports and fabric switch ports; matching the user ports and the fabric switch ports to deliver frames to a desired destination port; configuring the user

Art Unit: 2112

ports using a cable, so as to at least double the capacity of the director switch (e.g., col. 1, line 65 – col. 2, line 10). Carvey directs attention to particular features of the director switch and does not expressly mention the plurality of input/output modules, however this feature is an inherent part of Carvey's invention; as taught by Dally. Dally teaches the plurality of input/output modules (col. 2, lines 60-64). Carvey relies on Dally to enable his disclosure of a fabric router network and incorporates Dally by reference (col. 4, lines 62-66). Therefore, the input/output modules taught by Dally are features of the fabric router network and are inherent to the invention of Carvey.

Regarding claim 31, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses the director switch comprises a fibre channel switch (e.g., col. 1, lines 27-33).

Regarding claim 32, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein providing an identical number of user ports and fabric switch ports includes logically coupling two fabric switch modules into one fabric switch module (e.g., col. 2, lines 50-53).

Regarding claim 33, Carvey also discloses the inherent features of the fabric router network as taught by Dally. Dally discloses wherein providing an identical number of user ports and fabric switch ports includes coupling another chassis having a plurality of input/output modules and a plurality of fabric switch modules (e.g., col. 2, lines 47-50).

Art Unit: 2112

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Benton (US 5533201) discloses a particular embodiment for jumper connecting modular backplanes. Bala (US 6335992) discloses a scalable cross connect.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 703-305-8656. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chk


XUAN M. THAI
PRIMARY EXAMINER
TC2100